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Final Report

January 1982

COUNTERMEASURES: A SURVEY AND EVALUATION (U)

By: G. SCOTT HUBBARD (CONSULTANT) EDWIN C. MAY

Prepared for:

DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C. 20301

Attention: [REDACTED] SG1J
DT-1A

CONTRACT MDA903-81-C-0292

SPECIAL ACCESS PROGRAM FOR GRILL FLAME.
RESTRICT DISSEMINATION TO ONLY INDIVIDUALS WITH VERIFIED ACCESS.

NOT RELEASABLE TO
FOREIGN NATIONALS

333 Ravenswood Avenue
Menlo Park, California 94025 U.S.A.
(415) 326-6200
Cable: SRI INTL MPK
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International

*Final Report
Covering the Period October 1980 to September 1981*

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I OBJECTIVE

The objective of this program is to determine from a search of pertinent literature whether countermeasures may exist against psycho-energetic intrusions. Furthermore, should countermeasures exist, those most likely to yield results are outlined for further investigation.

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II INTRODUCTION

Should countermeasures (CM) against psychoenergetic intrusion exist, they will be accomplished by physical or by mental processes. Physical countermeasures, such as various forms of shielding, implicitly assume the existence of psychoenergetic interactions with the physical world. In the parapsychological literature, such interactions are referred to as remote perturbation (RP), psychokinesis (PK), telekinesis (TK), etc. Countermeasures accomplished by mental processes are difficult to define and even more difficult to investigate. Like jamming a radar signal, mental CM would most likely use the same process as that of the intrusion. Examples of potential mental CM drawn from the occult literature are "psychic attack," "hexes," and the like. This report focuses upon physical CM.

To determine the feasibility of a physical CM device, we must first assess whether simple intrusion detection is possible. The mechanism underlying such a detector would then serve as the basis for the development of a CM device.

Psychoenergetic intrusion may be classified into two categories:

- (1) Material objects are affected
- (2) Information only is obtained from the remote location.

We have surveyed the literature and evaluated the most recent laboratory experiments that address both types of intrusion. This report summarizes that investigation.

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III LITERATURE SURVEY AND EVALUATION

To achieve our objective, we have conducted a complete survey of the most recent ten years of parapsychological literature in five different journals.* We have limited the period surveyed:

- To ensure that the threat assessment of psychoenergetic intrusion is relevant to modern facilities.
- To make the survey chronologically compatible with a previously completed survey of random number generator (RNG) RP.

Sixty-five papers were identified that pertain to RP, exclusive of RNG studies. Combined with the papers reviewed in a previous report¹ we now have a data base of approximately 100 laboratory publications of experiments that suggest the probability of mental intrusion.

These reports fall into categories (Table 1) that can be arranged into a hierarchy of the magnitude of intrusive effect. This same organization yields a parallel hierarchy of credibility that is determined by soundness of methodology and replicability. In general, phenomena reported at the beginning of the table [e.g., effects on RNG, dice experiments, remote viewing] tend to be characterized by rigorous experimental design. Remote perturbation effects listed at the end of the table (metal bending, levitation) are more difficult to assess because of incomplete descriptions of controls and the near anecdotal nature of the reports. Most of the papers claiming evidence of physical effects are not subject

* These journals were the Journal of Parapsychology, the Journal of American Society for Psychical Research, the Journal of the Society for Psychical Research, the European Journal of Parapsychology, and Research in Parapsychology.

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Table 1

MENTAL INTRUSION

Type of Intrusion and Examples	Effect of Intrusion
<p>I Data gathering</p> <ul style="list-style-type: none"> • Remote viewing (RV) • Out-of-body experiences (OOBE) • Psychoenergetic data selection (PDS) <ul style="list-style-type: none"> - Pseudorandom number generator - True random number generator 	Minimal
<p>II Perturbation of systems and objects</p> <ul style="list-style-type: none"> • Transient systems <ul style="list-style-type: none"> - Dice throwing - Random number generators - Thoughtography - Spinning coin • Biological systems <ul style="list-style-type: none"> - Paramecia - Small animals - Humans (physiology and movement) • Stable systems <ul style="list-style-type: none"> - Strain gauge - Thermometry - Magnetometer - Bubble chamber • Static objects <ul style="list-style-type: none"> - Metal bending - Compass needle deflection - Moving plastic tubes, small jars, etc. - Table levitation 	Some physical effect
<p>III Unusual or rare RP</p> <ul style="list-style-type: none"> • Materializations • Large scale levitations and RP <ul style="list-style-type: none"> - D. D. Home 	Large scale effect

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to evaluation because the descriptions of the experiments are incomplete in one or more aspects. To consider the possibility of physical CM, we are forced to assume that all reports are true, and to exercise caution in drawing conclusions from the data base.

NOTE
ASSUMP-
TION

In analyzing the data-gathering form of intrusion, we find ample evidence in both the open and classified literature^{2,3} that RV may be a valuable information-gathering technology. Because no reported perturbation occur at the time of RV data acquisition, we are unable to recommend a physical countermeasure. However, evidence from two OOBE^{4,5} suggests that there may be a concomitant remote perturbation that can be detected at the time of the OOBE. Whether RV produces similar detectable effects remains to be determined.

NO CM
FOR RV

1973, 1974

Analysis of the remaining forms of intrusion presented in Table 1 revealed that virtually none of the papers discussed effects at distances greater than a few meters. (For example, almost all of the metal bending reported occurred with the subject actually touching the object in question.) These observations suggest that the simplest form of countermeasure in these cases may be distance between sensitive equipment and a putative RP agent.

CM:
KEEP PED
AWAY

Some forms of RP may be accomplished by unusual (but not psycho-energetic) human abilities. (For example, some authors have suggested that RP on static objects may be explained by the subject's ability to generate electric fields.) In such cases, standard shielding techniques would serve as an adequate countermeasure.

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IV THEORETICAL CONSIDERATIONS FOR PSYCHOENERGETIC INTRUSION

Theoretical understanding of psychoenergetic processes is still in its infancy. With one possible exception,^{8,7} all suggestions for mechanisms must be categorized as "plausibility" arguments.

Table 2 shows the current theoretical ideas with a brief description of each.

In order to suggest possible countermeasures, we must assume that a given mechanism is responsible for the phenomena. From Table 2, we see that Mechanisms 1 and 6 are "normal" because they involve well understood physical processes and thus have recognizable countermeasures. The remaining mechanisms, however, have no known physical CM. Yet, to disallow the possibility of some form of mental CM would be premature.

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Table 2

SUGGESTED PSYCHOENERGETIC MECHANISMS

Mechanism	Description	Possible Countermeasure
(1) Extremely low frequency (ELF)	Low frequency electromagnetic radiation emanating from the ~10 Hz component of normal brain functioning acts as information carrier.	Standard ELF shielding procedures (superconductivity and seawater)
(2) EPR paradox	Quantum mechanical argument for nonlorentzian (faster-than-light) "communication" between separated quantum systems.	Unknown physical CM or mental CM
(3) Hypergeometry	The distance between points in normal 3-space vanishes in hyperspace. Thus the case of access to "remote" information.	Unknown physical CM or mental CM
(4) General quantum mechanics	Human consciousness is intimately involved in the wave function collapse.	Unknown physical CM or mental CM
(5) Advanced waves in Hilbert space	Information propagates backward in time because of the time symmetries of the equations of quantum mechanics.	Unknown physical CM or mental CM
(6) Other exceptional, but nonpsychoenergetic human functioning	The ability to modify ^{8,9} normal body functioning in exceptional ways (e.g., large skin potentials, exceptional strength, ultrasonic generation and the like).	Standard physical shielding techniques

PHYSICIST SUGGESTIONS

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V RECOMMENDATIONS

Because considerable evidence for the information-gathering form of psychoenergetic intrusion exists and because evidence also exists that some forms of this intrusion incidentally affect physical objects, we recommend that a countermeasure program be initiated. To optimize the likelihood that such a program will have definitive results, we outline here a systematic, but limited effort.

R.V.

2

Several considerations beyond those of the survey must influence the design of a physical CM program. They are:

- Devices must be chosen that have demonstrated susceptibility to RP.
- Devices must be sensitive, yet isolated from the environment.
- Engineering (hardware/software) should be kept at a minimum.
- The approach should be systematic and should follow some of the earlier reported efforts.

Given these constraints, three types of hardware are suggested for study in a physical CM program:

- (1) A RNG device
- (2) Temperature sensing elements.
- (3) Film detectors.

A RNG device was selected because such devices have been under study for 10 years. It is clear from this data base and from one study¹ conducted at SRI International that some form of psychoenergetic interaction exists. To isolate the form of interaction and to assess the usefulness of RNGs as potential intrusion detectors, a modest redesign of the existing RNG

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device is necessary. Little or no effort is required to update our proven analytical system.

Although there are other devices (e.g., strain gauges, magnetometers, etc.) that have also been reported as susceptible to RP, we chose temperature sensing hardware and film detectors because of engineering considerations.

In summary, we recommend that an RNG device, temperature sensing elements, and film detectors be investigated with regard to their susceptibility to RP as an initial step toward intrusion detection and physical countermeasures.

CMT: THIS STUDY SHOULD
HAVE BEGUN EARLY
ON IF YOU ACCEPT
RV, & PK.

THIS WOULD BE A
LOGICAL MGT DECISION.

RATHER IT APPEARS
THAT THIS STUDY
WAS THROWN
TOGETHER TO
REACT TO FY 82/
FY 83 BUDGET
PROBLEMS WITH
CONGRESS

J/28 MAY 82

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UNCLASSIFIED

REFERENCES

1. E. C. May, B. S. Humphrey, and G. S. Hubbard, "Electronic System Perturbation Techniques," Final Report on SRI Project 8585, SRI International, Menlo Park, CA (September 1980), SECRET.
2. H. E. Puthoff and R. Targ, "A Perceptual Channel for Information Transfer over Kilometer Distances: Historical Perspective and Recent Research," Proc. IEEE, Vol. 64, No. 3, pp. 329-354 (March 1976).
3. H. E. Puthoff, R. Targ, E. C. May and I. Swann, "Advanced Threat Technique Assessment," Final Report, SRI Project 5309, SRI International, Menlo Park, CA (October 1978), SECRET.
4. R. L. Morris, "The Use of Detectors for Out-of-Body Experiences," Res. in Parapsy. 1973, pp. 114-116.
5. W. G. Roll, R. L. Morris, B. Harary, R. Wells and J. Hartwell, "Further OOBExperiments with a Cat as Detector," Res. in Parapsy. 1974, pp. 55-56.
6. K. Osis and D. McCormick, "Kinetic Effects at the Ostensible Location of an Out-of-Body Projection During Perceptual Testing," J. Amer. Soc. Psychical Res., Vol. 74 (July 1980).
7. B. Stevens, L. Burton and W. Joines, "Charge Build-Up on the Body as a Basis for the 'Human Aura' and Certain PK Events," Res. in Parapsy. 1974, pp. 77-80.
8. I. M. Kogan, "Is Telepathy Possible?," Radio Eng., Vol. 21, p. 75 (January 1966).
9. M. A. Persinger, "Geophysical Models for Parapsychological Experiences," Psychoenergetic Systems, Vol. 1, No. 2, pp. 63-74 (1975).

UNCLASSIFIED

BIBLIOGRAPHY BY CATEGORY

A. RP OF STATIC OBJECTS

1. Table of Levitation

Brooks-Smith, C., "Data-Tape Recorded Experimental PK Phenomena,"
J. Soc. Psychical Res., Vol. 48, No. 756 (June 1973).

Brooks-Smith, C., "Paranormal Electrical Conductance Phenomena,"
J. Soc. Psychical Res., Vol. 48, No. 764 (June 1975).

Brooks-Smith, C. and D. W. Hunt, "Some Experiments in Psychokinesis,"
J. Soc. Psychical Res., Vol. 45, No. 744 (June 1970).

2. Miscellaneous Static Objects

Cassirer, M., "Experiments with Nina Kulagina," J. Soc. Psychical Res.,
Vol. 47, No. 759 (March 1974).

Honorton, C., "Apparent Psychokinesis on Static Objects by a Gifted
Subject," Res. in Para. 1973, pp. 129-131.

Keil, H.H.J. and J. Fahler, "Nina S. Kulagina: A Strong Case for PK
Involving Directly Observable Movements of Objects Recorded on
Cine Film," Res. in Para. 1974, pp. 66-69.

Pratt, J. G. and H.H.J. Keil, "Firsthand Observations of Nina S. Kulagina
Suggestive of PK Upon Static Objects," J. Amer. Soc. Psychical Res.

Watkins, G. K. and A. M. Watkins, "Apparent Psychokinesis on Static Objects
by a Gifted Subject: A Laboratory Demonstration," Res. in Para. 1973,
pp. 132-134.

B. METAL BENDING (Exclusive of Strain Gauge)

Bender, H., "Further Investigations of Spontaneous and Experimental PK
by the Freiburg Institute," Res. in Para. 1976, pp. 202-203.

UNCLASSIFIED

UNCLASSIFIED

Cox, W. E., "A Scrutiny of Uri Geller," Res. in Para., pp. 63-65 (1974).

Crussard, C. and J. Bouvaist, "Study of Some Apparently Abnormal Deformations and Transformations of Metals," Memoires Scientifiques de la Revue de Metallurgie (February 1978).

Ellison, A. J., "Some Problems in Testing 'Mini-Gellers'," Res. in Para., pp. 203-205 (1976).

Price, E. A., "The Investigation of 'Mini-Gellers' in South Africa 18 Months After Their Manifestation," Res. in Para., pp. 18-19 (1976).

Scutt, D. C., "An Investigation into Metal Bending 'Geller Effect' with Ori Svoray," J. Soc. Psychical Res., Vol. 51, No. 787 (February 1981).

Shafer, M. G., "Exploratory Observations with PK Metal Benders from Southern California," Euro. J. of Parapsych., Vol. 3, No. 3 (November 1980).

Wolkowski, Z. W., "Reflections on Psychokinetic Phenomena," Res. in Para., pp. 207-209 (1976).

Wolkowski, Z. W., "Psychokinetic and Psychodynamic Phenomena Involving Jean Pierre Girard: A Preliminary Report," J. of Paraphys. (1976).

C. RP OF TRANSIENT SYSTEMS

1. Spinning Coin

Tart, C. T., M. Boisen, V. Lapey and R. Maddock, "Some Studies of Psychokinesis with a Spinning Silver Coin," J. Soc. Psychical Res., Vol. 46, No. 753 (September 1972).

Tart, C. T. and J. Palma, "Some Psi Experiments with Matthew Manning," J. Soc. Psychical Res., Vol. 50, No. 782 (December 1979).

2. Dice Experiments

Cox, W. E., "A Comparison of Different Densities of Dice in a PK Task," J. of Parapsych., p. 109 (1976).

Cox, W. E., "Blind PK with Dice," Res. in Para., pp. 22-23 (1976).

UNCLASSIFIED

Roll, M., "Some Recent Dice-Throwing Studies with Lalsingh Harrilliance," Proc. Parapsychological Assoc., 1971, pp. 19-22.

Steilberg, B. J., "Target Preference and Position Effects in a PK Investigation with Ten Subjects," Res. in Para., pp. 23-25 (1972).

3. Psychic Photography

Eisenbud, J., "The Series 'Blackies' and Related Phenomena," J. Soc. Psychical Res., Vol. 66, pp. 180-192 (1972).

Eisenbud, J., "Distortions in the Photographs of Ted Series," Res. in Para., pp. 145-147 (1979).

Eisenbud, J., et al., "An Archeological Tour de Force with Ted Series," J. Amer. Soc. Psychical Res., Vol. 64, No. 7 (January 1970).

Eisenbud, J., et al., "Two Camera and Television Experiments with Ted Series," J. Amer. Soc. Psychical Res., Vol. 64, No. 3 (July 1970).

Pratt, J. G., "Further Examples of Distortions in Photographs Produced by Ted Series," Res. in Para., pp. 147-149 (1979).

4. Raudive Voices

Smith, E. L., "The Raudive Voices - Objective or Subjective? A Discussion," J. Amer. Soc. Psychical Res., Vol. 68, No. 1 (January 1974).

5. Miscellaneous RP Experiments

Cox, W. E., "PK Tests with a Thirty-Two Channel Balls Machine," J. of Parapsy., Vol. 38, No. 1, pp. 56-58 (March 1974).

Cox, W. E., "Exploring 'Blind PK'," Res. in Para., pp. 129-131 (1976).

Stanford, R. G. and C. Fox, "An Effect of Release of Effort in a Psychokinetic Task," Res. in Para., pp. 61-63 (1974).

6. RP on Biological Systems

Brand, W., "Allobiofeedback: Immediate Feedback for a Psychokinetic Influence Upon Another Person's Physiology," Res. in Para., pp. 123-134 (1977).

UNCLASSIFIED

Brand, W., "Conformance Behavior Involving Living Systems," Res. in Para. 1978, pp. 111-115.

Brand, W., "Experiments with Matthew Manning," J. Soc. Psychical Res., Vol. 50, No. 782, pp. 199-223 (December 1979).

Edge, H., "The Effect of the Laying on of Hands as an Enzyme: An Attempted Replication," Res. in Para 1979, pp. 137-139.

Gruber, E. R., "PK Effects on Pre-Recorded Group Behavior of Living Systems," Euro. J. of Parapsych., Vol. 3, No. 2 (May 1980).

Kief, H. K., "A Method for Measuring PK Ability with Enzymes," Res. in Para. 1972, pp. 19-21.

Levin, J., "A Comparison Study of Precognition and PK in Golden Hamsters," Res. in Para. 1973, pp. 31-33.

Metta, L., "Psychokinesis on Lepidopterous Larvae," J. of Parpsych. (19 ?).

Morris, R. L., "The Use of Detectors for Out-of-Body Experiences," Res. in Para. 1973, pp. 114-116.

Pauli E. N., "PK on Living Targets as Related to Sex, Distance and Time," Res. in Para. 1972, pp. 68-70.

Randall, J. L., "An Attempt to Detect Psi Effects with Protozoa," J. Soc Psychical Res., Vol. 45, No. 744 (June 1970).

Randall, J. L., "Experiments to Detect a Psi Effect with Small Animals," J. Soc. Psychical Res., Vol. 46, No. 747 (March 1971).

Randall, J. L., "Two Psi Experiments with Gerbils," J. Soc. Psychical Res., Vol. 46, No. 751 (March 1972).

Randall, J. L., "An Extended Series of ESP and PK Tests with Three English Schoolboys," J. Soc. Psychical Res., Vol. 47, No. 762 (December 1974).

Rauscher, E. A. and B. A. Rubik, "Effects on Motibity Behavior and Growth Rate of Salmonella Typhirmurium in the Presence of a Psychic Subject," Res. in Para. 1979, pp. 140-142.

Roll, W. G., R. L. Morris, B. Harary, R. Wells and J. Hartwell, "Further OOB E Experiments with a Cat as a Detector," Res. in Para. 1974, pp. 55-56.

UNCLASSIFIED

Snel, F., "PK Influence on Malignant Cell Growth," Euro. J. of Parapsych., No. 10 (August 1980).

D. RP OF STABLE SYSTEMS

1. Bubble Chamber

Miller, R. N. and P. B. Reinhart, "Measuring Psychic Energy," Psychic, Vol. 6, No. 2, pp. 46-47 (1975).

2. Temperature Measurement

Mattrick, R. D., "PK Effect on a Clinical Thermometer with a Danish 'Mini-Geller' Girl," Res. in Para. 1976, pp. 21-22

Millar, B., "Thermistor PK," Res. in Para. 1975, pp. 71-73.

Placer, J., G. Breese, K. Corcoran, W. Crane and R. L. Morris, "Stable System Psychokinesis Studies Using Temperature Differential Between Thermistors," Res. in Para. 1975, pp. 69-71.

Schmeidler, G. R., "PK Effects Upon Continuously Recorded Temperature," J. Amer. Soc. Psychical Res., Vol. 67, No. 4 (October 1973).

Schmeidler, G., J. Gambale and J. Mitchell, "PK Effects on Temperature Recordings: An Attempted Replication and Extension," Res. in Para. 1975, pp. 67-69.

Schmeidler, G. R., J. Mitchell and N. Sandow, "Further Investigation of PK with Temperature Records," Res. in Para. 1974, pp. 71-73.

3. Metal Bending (with Strain Gauge)

Hasted, J. B., "Detection and Analysis of Psychokinetic Metal-Bending Forces," Res. in Para. 1976, pp. 216-218.

Hasted, J. B., "Physical Aspects of Paranormal Metal Bending," J. Soc. Psychical Res., Vol. 49, No. 733 (September 1977).

Hasted, J. B., and D. Robertson, "The Detail of Paranormal Metal-Bending," J. Soc. Psychical Res., Vol. 50, No. 779 (March 1979).

UNCLASSIFIED

Hasted, J. B. and D. Robertson, "Paranormal Action on Metal and its Surroundings," J. Soc. Psychical Res., Vol. 50, No. 784 (June 1980).

Keil, J., "Field Experiments with 30 Possible PK Subjects," Euro. J. of Parapsych., Vol. 3, No. 1 (November 1979).

Mattuck, R. D. and S. Hill, "Psychokinetic Stretching of an Aluminum Bar," Res. in Para. 1976, pp. 209-213.

Mattuck, R. D. and S. Hill, "Apparatus Error in PK Metal-Bending Experiment with Jean-Pierre Girard," Res. in Para. 1979, pp. 165-166.

Osis, K. and McCormick, D., "Kinetic Effects at the Ostensible Location of an Out-of-Body Projection During Perceptual Testing," J. Amer. Soc. Psychical Res., Vol. 74 (July 1980).

4. Magnetometer

Jarrard, R., K. Corcoran, R. Mayfield and R. L. Morris, "Psychokinesis Experiments with a Cryogenic Magnetometer," Res. in Para. 1975, pp. 64-66.

5. Rare or Unusual RP Abilities

Crookes, W., "Experimental Investigation of a New Force (D. D. Home)," Quarterly J. of Sci., Vol. 8 (July 1971).

Fielding, E., Sittings with Eusapia Palladino (University Books, New York, N.Y., 1963).

Schwartz, S., The Secret Vaults of Time, Chapter II (Grosset & Dunlap, New York, N.Y., 1978).

UNCLASSIFIED